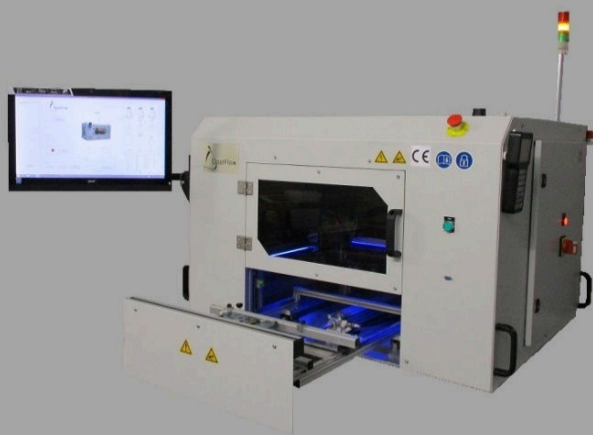


SELECTIVE CONFORMAL COATING AND DISPENSING SOLUTIONS

CF440 BENCHTOP ROBOT 'BIG WORKING AREA'

RELIABLE, ACCURATE AND EASY-MAINTENANCE SOLUTIONS FOR COATING AND DISPENSING

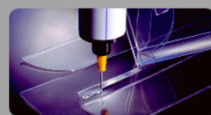
- ACCURATE 4-AXIS (X, Y, Z, TILT) ROBOTS TO PROVIDE THE HIGHEST QUALITY SUPPORT FOR DISPENSING AND COATING PURPOSES.
- REAL ELIMINATION OF MASKING OPERATIONS, SAVING TIME, MONEY AND GETTING HIGH EFFICIENCY AND REPEATABILITY LEVELS ON PCB'S PROTECTION PURPOSES.
- HIGH SPEED AND ACCURACY ON CONFORMAL COATING AND DISPENSING PROCESSES.
- AN EASY PROGRAMMING SYSTEM WITH SPECIALIZED SOFT IS DESIGNED FOR PROGRAMMING LINES, DOTS, ARCS, CIRCLES, POLYLINES, AREAS, ETC.
- EASY MULTI-BOARD PROGRAMMING SYSTEM.
- LAPTOP (WINDOWS 10)TO ACCESS ALL FUNCTIONS AND INFORMATION OF THE PROCESS.
- PROGRAMMING BY HIGH RESOLUTION CAMERA.
- CONTROL SOFTWARE **COATcontrolPRO 2** THAT ALLOWS US TO MANAGE ALL THE PARAMETERS NECESSARY FOR DISPENSING AND COATING PROCESSES ON SCREEN. ELEMENTS AS LEVEL SENSORS, STATE OF DOORS, CONTROL OF CONVEYOR, ETC. THEY ARE ALWAYS IN PRESENT IN OUR DAY TO DAY.
- **PATHCOAT** WINDOWS EXCLUSIVE SOFTWARE FOR GETTING THE BEST PRODUCTION RATIOS. AUTOMATIC OPTIMIZATION SYSTEM AND CAD IMPORT PROVIDE A HELPFUL TOOL FOR IMPROVING PATTERNS FROM A PIC.
- OPTIONAL FLOW METER MODULE. GET ON REAL TIME AMOUNT OF DISPENSED MATERIAL.
- OPTIONAL TRACEABILITY MODULE INCLUDING RECOGNITION OF 1D AND 2D BAR CODES (QR, DATAMATRIX, ETC.) FOR COMPLETE TRACEABILITY.
- OPTIONAL FIDUTIAL MARKS RECOGNITION RECALCULATE X AND Y POSITIONS IN DISPENSING OPERATIONS.
- ALL PARTS ARE MADE OF STAINLESS STEEL AND ALUMINUM FOR EASY CLEANING AND EFFICIENT PROTECTION AGAINST SOLVENTS AND ANY AGGRESSIVE LIQUID.
- EASY CONTROL OF ALL COATING AND DISPENSING PARAMETERS.
- BLACK LIGHT FOR INSPECTION PURPOSES AND WHITE LED LIGHT FOR PROGRAMMING.
- FLEXIBLE, ROBUST AND ACCURATE GANTRY SYSTEMS INTEGRATED WITH BALL SCREW MOTION SYSTEM AND SERVO MOTORS PROVIDE LONG-TERM RELIABILITY.
- A FULL RANGE OF VALVES IS AVAILABLE TO COVER ALL DISPENSING AND COATING DEMANDS. COATINGS, GASKETS, FILLINGS, AND OTHER KIND OF PROCESSES ARE ALSO POSSIBLE.



VIDEO APPS CF440 <https://youtu.be/BjA1M6luNLo>



MATERIALS: CONFORMAL COATINGS, ACRYLICS, URETHANES, SILICONES, RTV, BI-COMPONENT MATERIALS, ETC.



www.coatflow.com

CF440 VALVES

FULL VALVES RANGE FOR ALL KIND OF APPLICATIONS

SPRAY
MICROSPRAY
COATING/FILM
AGUJA
SPOOL
MICROSPOOL
ROTARY
CAVITY
JET



SPRAY / MICROSPRAY



SPOOL



ROTARY



MINI SPOOL

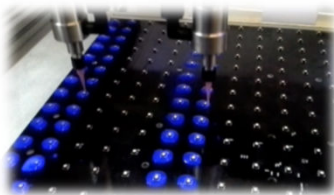


COATING FILM

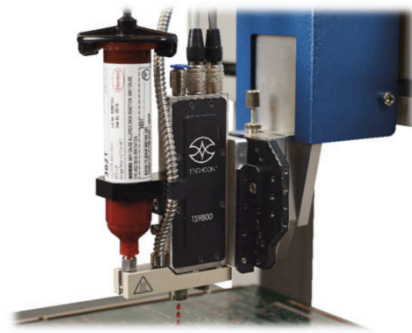
*SELECTIVE COATING
MICRO-SPRAY
'SPRAYING' AND 'FILM'
DISPENSING
GASKETING
UNDERFILLING
'POTTING'*



CAVITY PUMP MICRO



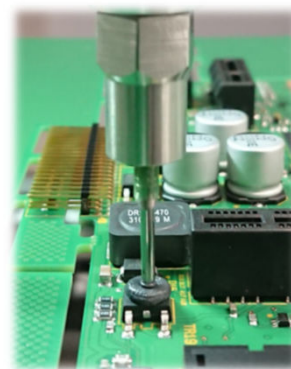
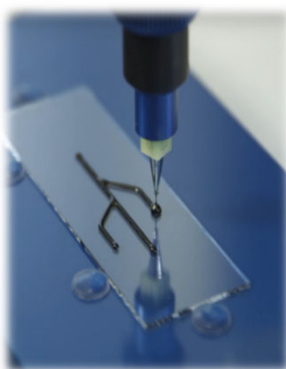
CAVITY PUMP



JET



CAVITY PUMP MICRO VALVES



CAVITY PUMP VAL FOR ABRASIVES

*'LEDS' APPS
MILITARY
AUTOMOTIVE
MEDICAL*

MATERIALS: CONFORMAL COATINGS, ACRYLICS, URETHANES, SILICONES, RTV, BI-COMPONENT MATERIALS, ETC.



CF440 COATCONTROLPRO 2.0 SOFTWARE

CONTROL SOFTWARE COATcontrolPRO 2.0

EXCLUSIVE SOFTWARE THAT ALLOWS US TO CONTROL ALL PARAMETERS AND EXTRAS SUCH AS CONVEYOR, STOPPERS, DOORS, EMERGENCIES, TANK AND T CARTRIDGE LEVEL ALARMS, PRODUCTION CONTROL, ETC.

WITH THIS SOFTWARE WE ALSO CONTROL THE QUANTITY OF MATERIAL DISPENSED PER BOARD AND YOU CAN SAVE THE VALUES IN CASE TRACEABILITY MODULE INSTALLED (IF FLOW METERS OPTION IS INSTALLED).

REAL-TIME VIEW OF WHICH VALVE IS WORKING, COMMUNICATION STATUS WITH UPPER AND LOWER MACHINES (MOD INLINE).

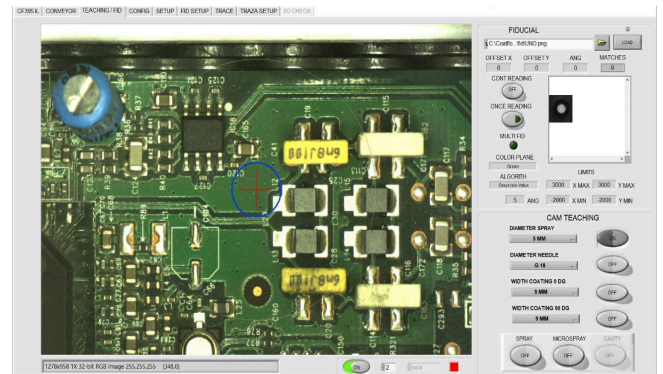
REAL-TIME CONTROL OF SPRAY PRESSURE.



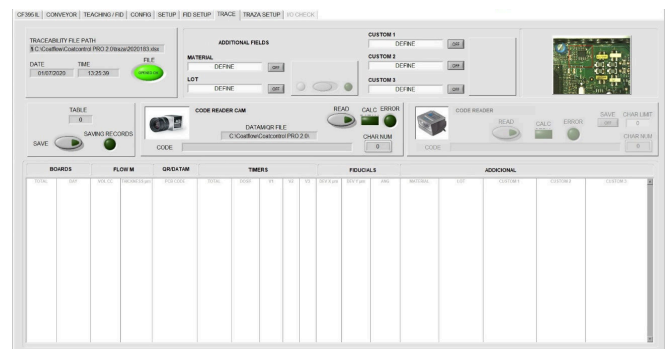
Main tab of COATcontrolPRO 2 SOFTWARE

REAL-TIME VIEW ON THE MAIN SCREEN :

- NUMBER OF DAY AND TOTAL CYCLES
- TOTAL CYCLE, TOTAL DISPENSING TIME AND DISPENSING VALVE PER VALVE
- MISCELLANEOUS ALARMS STATUS
- SERVO MOTORS AND DRIVERS STATUS
- CONVEYOR STATUS (MOD INLINE)
- STOPPERS STATUS , REGISTERING PINS AND CELLS (MOD INLINE)
- LEVELS OF TANKS, CARTRIDGES AND SYRINGES
- STATUS OF INSTALLED VALVES
- LOW PRESSURE AND SPRAY VALVE ALARM.
- **FLOW METER** STATUS, REAL TIME QUANTITY, LAST BOARD VALUE AND TOTAL
- SMEMA STATUS (MOD INLINE)
- BLACK/WHITE LIGHT STATUS SWITCH
- DOOR / DRAWER STATUS
- VALVES STATUS
- PROGRAMMING / VISION CAMERAS (OPTIONAL)
- FIDUCIAL PROCESS (OPTIONAL)
- 1D / 2D BARCODE VALUES (OPTIONAL)



VISION PROGRAMMING MODULE



TRACEABILITY MODULE

MATERIALS: CONFORMAL COATINGS, ACRYLICS, URETHANES, SILICONES, RTV, BI-COMPONENT MATERIALS, ETC.



CF440 PATHCOAT SOFTWARE

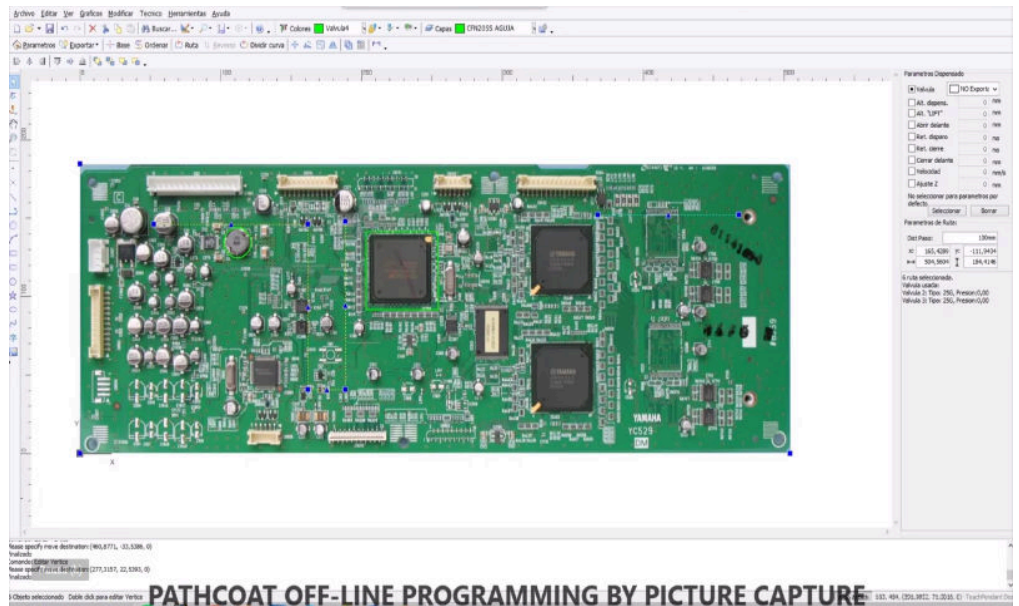
OFF-LINE PROGRAMMING SOFTWARE PATHCOAT 8 (NOT INCLUDED)

EXCLUSIVE PROGRAMMING OFFLINE WINDOWS SOFT. YOU CAN IMPORT A CAD FILE OR YOU CAN MAKE A PICTURE OF YOUR BOARD TO PLACE ALL KIND OF PATHS LINE DOTS, LINES, DOTS, ARCS, POLYLINES, AREAS, ETC.

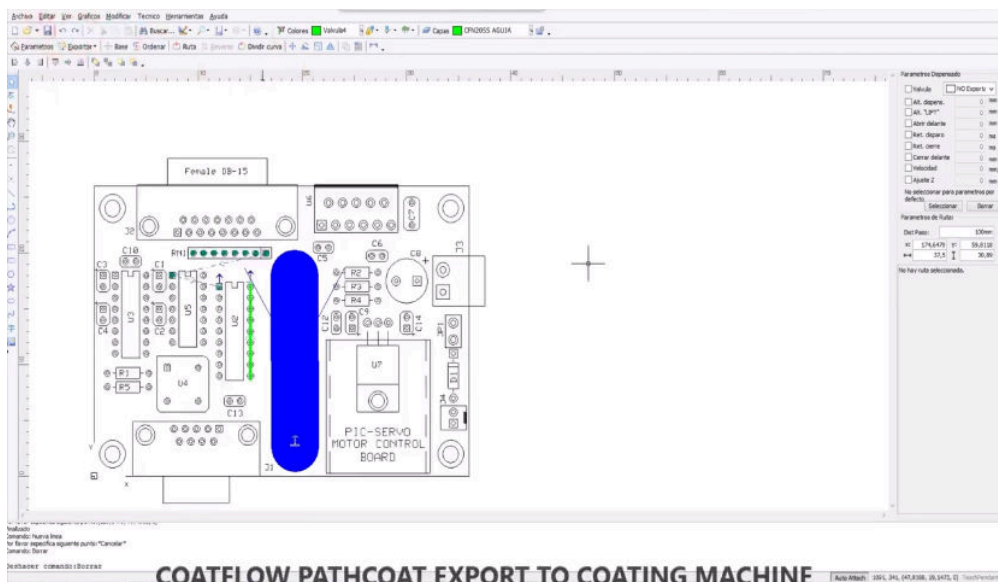
CONTROL OF ALL DISPENSING AND COATING PARAMETERS.

YOU CREATE AN EXPORTABLE PROGRAM VIA USB TO MACHINE TEACH PENDANT.

POSSIBILITY OF IMPORTING AN IMAGE MADE TO A PCB AND "PAINTING" DIRECTLY ON IT.
SELECTION OF THE VALVE MODEL (REAL VALVE WIDTH VIEW) AND TOTAL CONTROL OF PARAMETERS AS OPENING, CLOSED, Z-RETRACT, ETC.



PATHCOAT OFF-LINE PROGRAMMING BY PICTURE CAPTURE



POSSIBILITY OF IMPORTING A PCB FROM DXF FORMAT.
SELECTION OF THE VALVE MODEL (REAL VALVE WIDTH VIEW) AND TOTAL CONTROL OF PARAMETERS AS OPENING, CLOSED, Z-RETRACT, ETC

MATERIALS: CONFORMAL COATINGS, ACRYLICS, URETHANES, SILICONES, RTV, BI-COMPONENT MATERIALS, ETC.



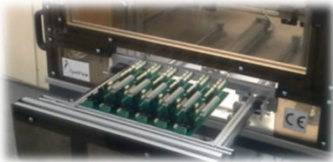
CF440 ACCESSORIES

AUTOMATIC LOAD / UNLOAD DRAWER (OPTIONAL)

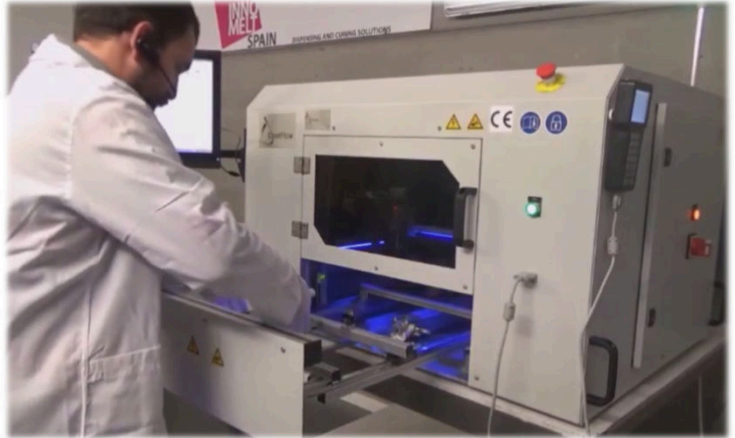
THIS DRAWER (OPTIONAL) ALLOWS TO AUTOMATE THE PROCESS OF LOADING AND UNLOADING PCB,S, WITH A IMPORTANT REDUCTION OF THE CYCLE TIME.

THE SYSTEM WILL AUTOMATICALLY OPEN AT THE START OF THE CYCLE, WAIT FOR THE LOAD OF THE PCB AND CLOSE WHEN WE INDICATE IT (IT IS ALSO POSSIBLE TO TIMER THIS PROCESS).

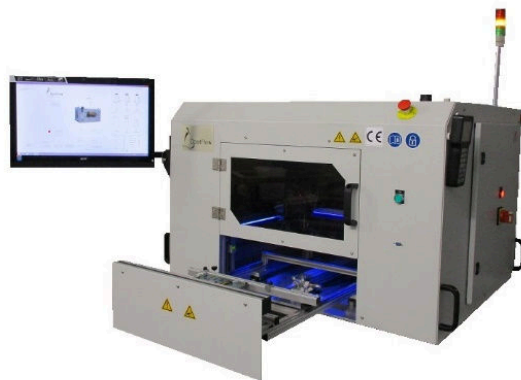
WHEN YOU HAVE FINISHED CARRYING OUT THE COATING / DOSING / DISPENSING PROCESS, THE DRAWER WILL AUTOMATICALLY OPEN WAITING TO CHANGE THE FINISHED PCB FOR A NEW ONE.



AUTOMATIC
MULTIPANEL
LOADING SYSTEM

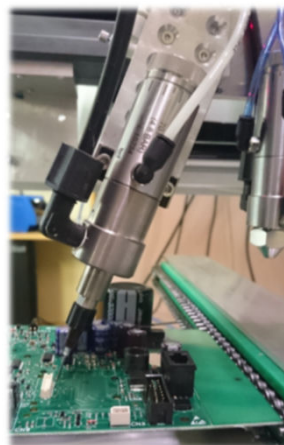
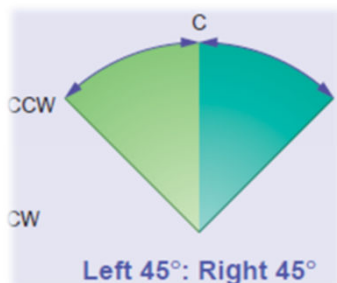


AUTOMATIC LOADING SYSTEM OPENING

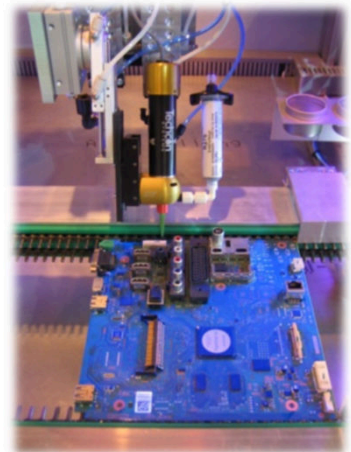


5° AXIS TILT (INCLUDED)

POSSIBILITY OF *TILTING* THE VALVE BY SOFTWARE A PRE-DEFINED ANGLE TO INTRODUCE THE MATERIAL IN "DARK" AND COMPLEX AREAS TO ATTACK VERTICALLY.
POSSIBILITY OF PLACING 2 OR 3 POSITIONS TILT.



NEEDLE VALVE 'TILTED'



ROTARY VAVLE IN 'TILT' POS

MATERIALS: CONFORMAL COATINGS, ACRYLICS, URETHANES, SILICONES, RTV, BI-COMPONENT MATERIALS, ETC.



CF440 ACCESSORIES

FLOW METER 'REAL-TIME MATERIAL QUANTITY METER (NOT INCLUDED)

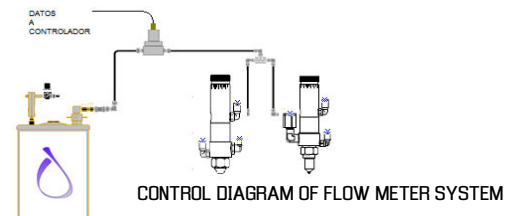
THIS OPTION ALLOWS US TO HAVE A TOTAL TRACEABILITY ON THE QUANTITY OF MATERIAL APPLIED PER BOARD (AND THEREFORE THE THICKNESS ALSO) AS WELL AS THE PRECISE CONTROL OF POSSIBLE OCCLUSIONS IN THE VALVE.

THE SYSTEM CONSISTS OF A PRECISION 'ENCODER' WHICH IS MEASURING IN REAL TIME THE AMOUNT OF MATERIAL THAT IS CIRCULATING THROUGH THE SUPPLY HOSE, UPDATING DATA TO THE CONTROLLER IN REAL TIME.

OPTIONAL MOD TRACEABILITY TABLE MANAGEMENT (SAVED IN EXCEL) WITH ALL THE PARAMETERS RELATED TO THE PROCESS, LIKE QR CODE, DISPENSING TIME, QUANTITY OF MATERIAL, TYPE OF COATING, ETC..



TRACEABILITY MODULE IN COATONTROPRO 2.0



CONTROL DIAGRAM OF FLOW METER SYSTEM

AUTOMATIC PARK AND PURGE SYSTEM (INCLUDED)

THIS SYSTEM ALLOWS US TO ALWAYS KEEP THE VALVES READY FOR USE. THE SYSTEM TAKES CARE THAT EACH CERTAIN TIME (PROGRAMMABLE) THE VALVES WILL PERFORM A PURGE IN SPECIAL CUPS, TO KEEP THE END PART ALWAYS IN PERFECT CONDITION AND AVOID THE LOGICAL PROBLEMS THAT OCCUR WITH AMBIENT HUMIDITY IF VALVE IS NOT DISPENSING CONTINUOUSLY.

THEY CAN ALSO BE IMMERSSED IN THE CUPS WITH SOLVENT, AND WHEN WE START WORKING, THEY WILL AUTOMATICALLY BE PURGED IN THE PURGE CUPS PREPARED FOR THIS.

THIS SYSTEM CAN BE PROGRAMMED EVERY CERTAIN TIME OR EACH CERTAIN NUMBER OF CYCLES.



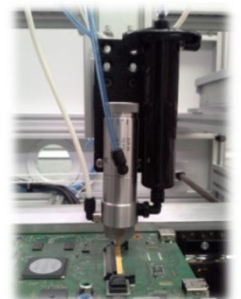
VALVES IN AUTOMATIC PURGE PROCESS

MATERIALS HANDLING

FULL RANGE OF PRESSURE TANKS OF 2, 10 AND 30 LITRES WITH LOW LEVEL SENSOR.

6 AND 12 OZ-CARTRIDGES FOR SOLVENTS IN PURGING, TRIALS OR EVEN FOR SMALL PRODUCTIONS.

FOR 3, 5, 10, AND 30 CC SYRINGES ADAPTOR FOR ADHESIVES AND SOLDER PASTES.



VALVE WITH 30 CC SYRINGE ADAPTOR (UV CURE CONFORMAL COATING)

MATERIALS: CONFORMAL COATINGS, ACRYLICS, URETHANES, SILICONES, RTV, BI-COMPONENT MATERIALS, ETC.



CF440 ACCESSORIES

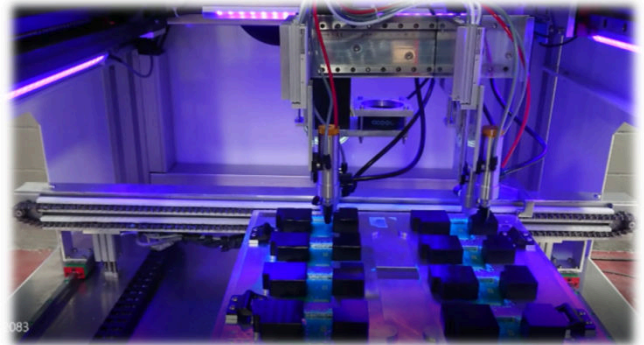
DUPLICATION OF VALVES IN HEAD (NOT INCLUDED)

THIS OPTION ALLOWS US TO DRASTICALLY REDUCE THE CYCLE TIME IN PCB'S PANELIZED BY DUPLICATING THE VALVE / S.

THE SYSTEM ALLOWS TO WORK WITH THE MAIN VALVE/S AND THE DUPLICATED VALVES AS INDEPENDENT VALVES WITH INDEPENDENT PROGRAMMING OR AS A COPY SYSTEM SO THAT ONLY THE MASTER VALVE/S MUST BE PROGRAMMED AND THE COPY WILL PERFORM THE SAME.

WE COULD HAVE THE SAME MATERIAL FEEDING ALL THE VALVES OR DIFFERENT MATERIALS IN EACH ONE.

THIS SERIES SYSTEM BRINGS MANUAL VALVE DISTANCE ADJUSTMENT, WITH THE POSSIBILITY OF AUTOMATING THIS PROCESS BY SOFTWARE (OPTIONAL).



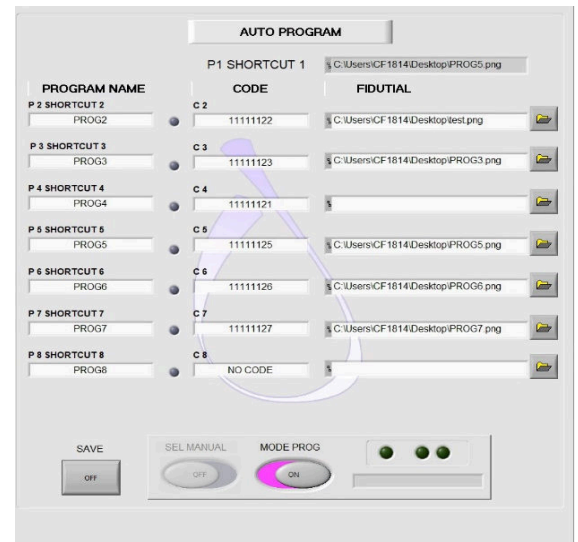
SPRAY AND NEEDLE VALVES DUPLICATION SYSTEM WITH MANUAL ADJUSTMENT

AUTOMATIC PROGRAM SELECTION BASED ON CODE (NOT INCLUDED)

THIS OPTION ALLOWS TO AUTOMATE THE PRODUCTION IN CASE OF HAVING SEVERAL REFERENCES IN PRODUCTION AT THE SAME TIME.

THE SYSTEM WILL READ THE QR OR DATAM CODE AND COMPARE IT WITH THE PRE-ASSIGNED CODES, LOADING AND EXECUTING IN REAL TIME THE SPECIFIC COATING PROGRAM FOR THAT BOARD.

EACH PROGRAM MAY BE ASSIGNED AN INDEPENDENT FIDUCIAL CHECK PATTERN.



ASSIGNMENT OF PROGRAM, CODE AND FIDUCIAL MARK

MATERIAL HEATING (NOT INCLUDED)

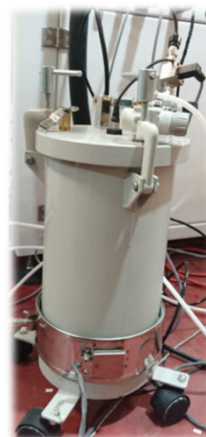
THIS SYSTEM ALLOWS TO HEAT THE MATERIAL TO OBTAIN A LOWER VISCOSITY AND THEREFORE A BETTER CONTROL OF THICKNESS AND SIDE GEOMETRIES.

INDEPENDENT CONTROLS FOR TANK AND HEATED PIPE.

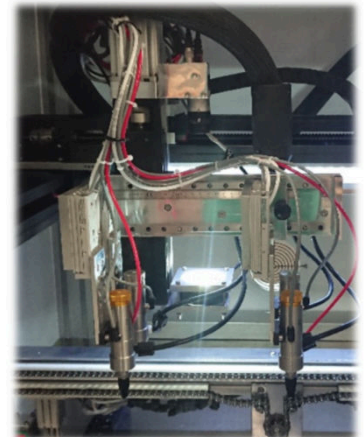
ATTENTION: NOT ALL MATERIALS ARE ALLOWED TO BE HEATED.



PID TEMPERATURE CONTROL.
CONTROLS ARE INDEPENDENT IN
TANK AND HOSES.



HEATED TANK



HEATED HOSE

MATERIALS: CONFORMAL COATINGS, ACRYLICS, URETHANES, SILICONES, RTV, BI-COMPONENT MATERIALS, ETC.



CF440 ESPECIFICATIONS

GENERAL SPECIFICATIONS INCLUDED

MOTION:

- BALL SCREW DRIVEN BY SERVO MOTORS
- X, Y SPEED: 0 A 900 MM/SG
- Z SPEED: 0 A 900 MM/SG
- POSITIONAL ACCURACY: 0.005 MM
- POSITIONAL PRECISION: 0.01 MM

WORKING AREA:

- STANDARD 500X500X100 MM (WITH PURGE AND PARK CUPS 500X465 MM)
- WITH TEACHING CAMERA THE PROGRAMMING AREA IS REDUCED DEPENDING ON THE VALVE CONFIGURATION (ASK ABOUT FINAL AREA)

PCB'S SUPPORT

- ADJUSTABLE FIXTURE FOR BOARDS
- COMPONENT CLEARANCE UP TO 60 MM (BELOW AND ABOVE). IF AUTO DRAWER INSTALLED BELOW CLEARANCE LESS THAN 50 MM

CONTROL

- LAPTOP PC (WINDOWS 10 INCLUDED)

SOFTWARE

- COATCONTROL PRO 2.0 @ INCLUDED
- PATHCOAT @ OFFLINE NOT INCLUDED

ACCESORIES INCLUDED

- AUTOMATIC PARK AND PURGE SYSTEM
- AUTOMATIC CONTROL OF VALVE PARAMETERS
- 5TH-AXIS TILT IN NEEDLE OR MICROSPRAY VALVE
- THREE-COLOURS AND BUZZER LIGHT TOWER
- 5 LITERS STAINLESS STEEL PRESSURE TANK WITH LOW LEVEL SENSOR
- 6 OZ-CARTRIDGE WITH LOW LEVEL SENSOR
- SYRINGES ADAPTOR 30 AND 55 CC

VALVES CONFIGURATION

- 2 OR 3 VALVES: PRECISION SPRAY, MICROSPRAY, NEEDLE, ROTARY ETC.

POWER SUPPLY

- 110/230V 1 FASE. 10A MAX

SECURITY

- EMERGENCY BUTTON
- SECURITY INTERLOCKS IN DOOR
- EXHAUST PUMP SENSOR
- SPRAY SENSOR CONTROL

CERTIFICATION

- CE AND SMEMA



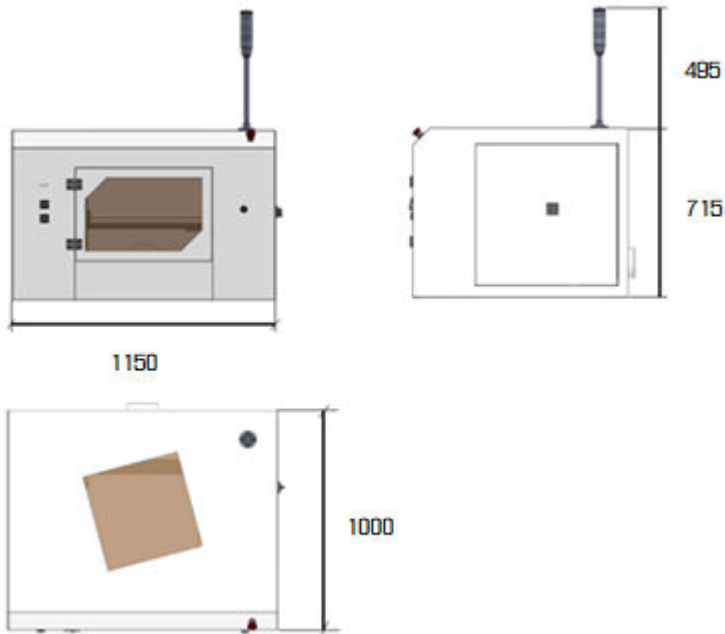
OPTIONAL EQUIPMENT

- 4TH-AXIS ROTATION IN HEAD
- PROGRAMMABLE MARK FIDUCIAL SYSTEM
- TEACHING CAMERA
- AUTOMATIC WIDTH PATTERN IN COATING VALVE
- AUTOMATIC LOADING/UNLOADING SYSTEM (DRAWER) FOR BOARDS
- *FLOWMETER* IN VALVES
- TRACEABILITY MODULE. BARCODE READER (CAM) QR, DATAM, ETC.
- SELECTION AND AUTOMATIC LOADING OF PROGRAM ACCORDING TO CODE (DATAMATRIX, QR, 2D, ETC)
- HEATING SYSTEM IN TAKS AND HOSES
- AUTOMATIC NEEDLE CALIBRATION. X, Y AND Z
- PRECISON WEIDHT CONTROL SYSTEM
- VALVES DUPLICATION FOR LOWER CYCLE TIME
- SOFTWARE AVAILAIBLE IN LOCAL LANGUAGES
- PRESSURE TANKS (FROM 2 TO 30 LITRES)
- CARTRIDGE RETAINER (2.5, 6, 8, 12 AND 20 OZ)
- LOW LEVEL SENSOR FOR TANKS AND CARTRIDGES. SCALE TYPE
- SYRINGES ADAPTOR (3, 5, 10, 30 AND 55 CC)



CF440 DIMENSIONS

INSTALLATION REQUIREMENTS



ROBUST TABLE OR FRAME WITH 1200X1100 MM.
EQUIPMENT WEIGHT 350 KG.
OPEN DOOR REQUIRES 650 MM FREE CLEARANCE IN THE FRONT.
AUTOMATIC LOADING/UNLOADING SYSTEM REQUIRES 500 MM CLEARANCE IN THE FRONT IS REQUIRED FOR DOOR OPENING.
600 MM CLEARANCE IN THE RIGHT HAND SIDE IS REQUIRED FOR ELECTRIC CABINET OPENING.

PNEUMATIC AIR SUPPLY NEEDS TO BE DRY AND WITH NO DUST, OIL, ETC.
AIR SUPPLY 5.5 BARS / 80 PSI – 10 BARS / 145 PSI (MIN AND MAX).
8 MM-DIAMETER QUICK CONNECTION HOSE.

ELECTRIC POWER 110/230V 10A MAX. 50-60 HZ.

MINIMUM EXHAUST 200 M3/H. HOSE DIAMETER 120 MM.

PC UNDER WINDOWS 10 FOR **PATHCOAT 8** OFFLINE SOFTWARE AND **COATcontrolPRO 2 8** INCLUDED

INTERNATIONAL SALES DEPARTMENT

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www.innomelt.com

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